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**FEDERAL COMMUNICATIONS COMMISSION**  
445 12<sup>th</sup> STREET SW  
WASHINGTON DC 20554

JUL 21 2006

MEDIA BUREAU  
AUDIO DIVISION  
APPLICATION STATUS: (202) 418-2730  
HOME PAGE: [www.fcc.gov/mb/audio](http://www.fcc.gov/mb/audio)

PROCESSING ENGINEER: Rudy Bonacci  
TELEPHONE: (202) 418-2722  
FACSIMILE: (202) 418-1410  
MAIL STOP: 1800B3  
INTERNET ADDRESS: [rodolfo.bonacci@fcc.gov](mailto:rodolfo.bonacci@fcc.gov)

First Broadcasting Sacramento Licensing, LLC  
750 North Saint Paul  
10<sup>th</sup> Floor  
Dallas, TX 75201

In re: KXCL(FM), Placerville, CA  
Facility I.D. No.: 36028  
Request for confirmation of compliance with  
47 C.F.R. § 73.1125

Dear Licensee:

This refers to your attorney's letter requesting confirmation that KXCL's proposed main studio complies with 47 C.F.R. § 73.1125. The letter included a supplemental showing of technical statements and studies which use an alternate contour prediction methodology to demonstrate that the proposed main studio location is within the 70 dBu field strength contour for the facilities specified by KXCL(FM)'s license BLH-20031202ACK, as required by 47 C.F.R. § 73.1125. The proposed main studio is located at 298 Commerce Circle, Sacramento, California (38° 35' 59" N.L., 121° 27' 40" W.L.).

The engineering study which KXCL submitted calculated the desired field strength contours using the free space plus diffraction and Longley-Rice models, a variation of the irregular terrain model, permitted by 47 C.F.R. § 73.313(e) and (f). Your study indicates the distance to KXCL's authorized 70 dBu field strength contour exceeds the distance to the 70 dBu field strength contour as calculated using the F(50,50) propagation curves by approximately 62% (Longley-Rice), 70% (free space plus diffraction), along the azimuth from KXCL's transmitter location in the direction of the proposed main studio. Therefore, your engineering showing was referred to the Commission's Office of Engineering and Technology (OET) for a detailed propagation analysis.

By way of a Memorandum dated July 12, 2006, the OET confirmed that the proposed main studio location is encompassed by the 70 dBu field strength contour of the facilities specified in KXCL's license. Accordingly, we find that KXCL's proposed main studio location would be in compliance with 47 C.F.R. § 73.1125.

Sincerely,



Rodolfo F. Bonacci  
Assistant Chief  
Audio Division  
Media Bureau

cc: Phil Marchesiello, Esq.

**Date:** July 12, 2006

**To:** Rodolfo F. Bonacci, Assistant Chief, Audio Division

**From:** Ronald Chase, Chief, Technical Analysis Branch  
Electromagnetic Compatibility Division

**Subject:** City grade coverage of main studio, KXCL-FM, Placerville, CA

Reference your memorandum dated June 15, 2006, requesting an evaluation of the subject application concerning city grade coverage of the main studio site.

First Broadcasting Sacramento Licensing, LLC, licensee of KXCL-FM, Placerville, California, submitted calculations done by a computer program using prediction techniques found in NBS Technical Note 101 to support the claim that the 70 dBu contour of the proposed FM operation would cover the main studio site.

From observation of the terrain profile along the radials through the principal community, we note that the transmitter is on a mountaintop 950 m AMSL overlooking a low smooth sloping valley 5 m AMSL. For propagation to locations beyond 40 km, the effective transmitting antenna height is 900 m and the terrain roughness factor,  $\Delta H$ , is 0 m. Because of the favorable terrain conditions, the distance to the 70 dBu contour is greater than that predicted by the standard method.

Based on the results of our predictions (see attachments for detail), we conclude that the 70 dBu contour of the proposed FM operation would cover the main studio site. If you have any questions concerning these calculations, please contact Harry Wong at 418-2437.

Ronald Chase

Attachments

UNITED STATES GOVERNMENT  
M E M O R A N D U M

DATE: JUN 15 2006

TO: Ronald Chase  
Chief, Technical Analysis Branch  
Electromagnetic Compatibility Division  
Office of Engineering and Technology  
Room 7-A364

FROM: Rodolfo F. Bonacci  
Assistant Chief  
Audio Division  
Media Bureau

IN RE: Request for confirmation that the proposed location of the main studio for KXCL(FM), Placerville, CA complies with 47 C.F.R. § 73.1125.

A supplemental showing has been submitted by First Broadcasting Sacramento Licensing, LLC ("FBSL"), licensee of Radio Station KXCL, Placerville, California to support the proposed location of its main studio at 298 Commerce Circle, Sacramento, California (38° 35' 59" N.L., 121° 27' 40" W.L.) The purpose of this showing is to determine if the proposed main studio is located within KXCL's 70 dBu city-grade coverage contour, as required by 47 C.F.R. § 73.1125.

FBSL has submitted an engineering statement prepared by Tiffany E. Ligon of FBSL which supports KXCL's cause. The submitted showing demonstrates that the terrain departs widely by specifying a terrain roughness factor (delta H) of 400 meters. (The delta H must be either less than 20 meters or greater than 100 meters.) The submitted showing uses the Institute of Telecommunications Sciences Irregular Terrain Model, also known as the "Longley-Rice" model and the basic free space model, permitted by 47 C.F.R. § 73.313(e) and (f). Your comments are requested on whether the supplemental showing (1) establishes that the terrain between the transmitter site and the main studio site "departs widely" in compliance with § 73.313(f) and (2) demonstrates that the main studio receives at least a 70 dBu signal strength from KXCL, and therefore, is in compliance with 47 C.F.R. § 73.1125(a).

Our initial review of this supplemental showing revealed that in the direction of the main studio the 70 dBu field strength contour, as calculated using Longley-Rice and basic free space, extends beyond the 70 dBu field strength contour, as calculated by Commission rule § 73.313, by 62% and 70%, respectively, for KXCL. (By policy the extension must be ten percent or more for referral to you for analysis.) Because we cannot confirm compliance with § 73.1125(a) in this case, we request your assistance. Attached is a copy of the supplemental engineering showing. If you have any questions, please contact Rudy Bonacci at 418-2722.

  
Rodolfo F. Bonacci

RFB

# STAMP & RETURN

## AKIN GUMP STRAUSS HAUER & FELD LLP

Attorneys at Law

PHIL MARCHESIELLO  
202.887.4348  
Fax: 202.955-7611  
pmarchesiello@akingump.com

June 13, 2006

RECEIVED

JUN 13 2006

Federal Communications Commission  
Office of Secretary

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> St., S.W.  
Washington, DC 20054

**Re: First Broadcasting Sacramento Licensing, LLC  
KXCL(FM), Placerville, CA (Facility ID No. 36028)  
Request for Commission Determination of Permissibility of New Main Studio  
Location Under 47 C.F.R. 73.1125(a)(2)**

Dear Ms. Dortch:

By this letter, First Broadcasting Sacramento Licensing, LLC ("FBSL"), licensee of KXCL(FM), Placerville, CA (Facility ID No. 36028) (the "Station"), requests the Federal Communications Commission ("Commission") to determine whether the new Station main studio location proposed herein by FBSL complies with Section 73.1125(a)(2) of the Commission's rules.<sup>1</sup>

Per the instructions of the Commission,<sup>2</sup> attached hereto please find a supplemental showing demonstrating that the proposed new main studio location falls within the Station's principal community contour set forth in the supplemental showing using two supplemental contour prediction methods. As required by the Commission, use of the supplemental contour prediction methods results in a principal community contour that is at least ten percent larger

<sup>1</sup> 47 C.F.R. § 73.1125(a)(2).

<sup>2</sup> Amendments of Parts 73 and 74 of the Commission's Rules To Permit Certain Minor Changes in Broadcast Facilities Without a Construction Permit, *Report and Order*, 12 FCC Rcd 12371, ¶¶ 69-72 (1997); see also *Telemedia Broadcasting, Inc., WGRQ(FM), Colonial Beach, Virginia, and Rappahannock River Broadcasting, LLC WGRX(FM), Falmouth, Virginia, Memorandum Opinion and Order*, 17 FCC Rcd 14604, ¶ 4 (EB rel. July 30, 2002) ("The Commission has approved the use of supplemental showings (including the Longley-Rice analysis) to show compliance with main studio requirements in situations involving irregular terrain.").

**AKIN GUMP  
STRAUSS HAUER & FELD LLP**

Attorneys at Law

Ms. Marlene H. Dortch  
June 13, 2006  
Page 2

than the principal community contour defined using the standard contour prediction method.<sup>3</sup> If the Commission determines based on the attached supplemental showing that the proposed Station main studio location falls within the Station's principal community contour, FBSL understands that it may relocate its main studio to this location without additional consent from the Commission but must thereafter promptly notify the Commission that the Station's main studio was relocated.

The instant request is not feeable.<sup>4</sup> Undersigned counsel has been authorized to state on behalf of FBSL that neither FBSL nor any principal of FBSL is subject to a denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862.

Please do not hesitate to contact the undersigned with any questions that you may have regarding this matter.

Respectfully submitted,



Phil Marchesiello, Esq.

*Counsel for First Broadcasting Sacramento Licensing, LLC*

Enclosure

cc: Hal Rose, Senior Vice President, FSBL  
Tiffany Ligon, Technical Analyst, FSBL

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<sup>3</sup> See id. at ¶ 70.

<sup>4</sup> See id. at ¶ 71 n.54 ("No filing fee is required for a supplemental showing filed for this purpose, which should be filed with the Office of the Secretary at the Commission, not Mellon Bank . . .").



**FIRST BROADCASTING SACRAMENTO LICENSING, LLC  
STATION KXCL(FM)  
PLACERVILLE, CALIFORNIA  
CH 221A 6.0 KW(H&V) 100 METERS  
SUPPLEMENTAL SHOWING  
IN SUPPORT OF A  
REQUEST FOR FCC CONFIRMATION THAT  
PROPOSED MAIN STUDIO LOCATION  
COMPLIES WITH SECTION 73.1125**

This supplemental showing was prepared by First Broadcasting Sacramento Licensing, LLC ("First Broadcasting"), licensee of commercial radio station KXCL(FM), Placerville, California, (Facility ID 36028) in support of a request for FCC confirmation that the proposed KXCL main studio complies with Section 73.1125 of the FCC rules. The street address for the proposed KXCL studio is ~~298 Commerce Circle, Sacramento, California 95815~~<sup>1</sup>. Two supplemental propagation predication methodologies are used herein to demonstrate that the proposed KXCL main studio location will receive signal strength of 70 dBu or greater.

The FCC has authorized KXCL (FCC File No. BPH-20050511AEB) to relocate to a new transmitter site 16.7 kilometers southeast of its licensed

<sup>1</sup> The proposed KXCL main studio location is located at geographic coordinates ~~33° 35' 59.4" North~~  
~~Latitude 121° 27' 40.2" West~~ Longitude referenced to the 1927 North American Datum.



site. From this new transmitter site, the predicted KXCL 70 dBu contour does not enclose the proposed main studio location when using the standard FCC propagation method.

The FCC permits the use of alternate propagation prediction models in demonstrating compliance with the main studio location rule subject to the submission of a supplemental showing containing the following elements.

- (1) an explanation of why use of a supplemental showing is warranted (e.g., very flat, very rough, or anomalous terrain), and a showing of how the terrain departs widely from the average terrain assumed for the F(50,50) propagation curves in 47 C.F.R. Section 73.333 for FM stations;
- (2) a showing that the distance to the 70 dBu contour as predicted by the supplemental method is at least 10% larger than the distance predicted by the standard contour prediction method;
- (3) the coordinates of the proposed main studio location for showings of compliance with 47 C.F.R. Section 73.1125;



- (4) a map showing the relative locations of the main studio location, or legal boundaries of the community of license, and the principal community contours as predicted by the standard and supplemental contour prediction methods;
- (5) a list of assumptions and an explanation of the method used in generating the supplemental analysis; and
- (6) sample calculations using the supplemental procedure.

Figures 1 through 3 of this supplemental showing depict the terrain elevation profiles between the authorized KXCL transmitter site and the proposed KXCL main studio location and at azimuths plus and minus one degree of the bearing from the transmitter site to the proposed main studio location. The estimated field strength curves shown in Figure 1 of Section 73.333 of the FCC rules are based on an assumed terrain roughness reference value of 50 meters. For each of the three terrain profiles, the calculated ~~terrain roughness factor<sup>2</sup> is approximately 400 meters and~~ meets the "terrain

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<sup>2</sup> The terrain roughness factor was computed using the methodology described in Section 73.313(f) of the FCC rules.





departs widely” criteria for use of a supplemental showing in demonstrating compliance with Section 73.313(e) of the FCC rules.<sup>3</sup>

### PROPAGATION MODELS USED IN THE SUPPLEMENTAL SHOWING

~~Two propagation models~~ were used in the preparation of the supplemental showing: ~~a basic free space model~~ that included additional loss due to diffraction and Fresnel zone obstruction and the familiar ~~Longley-Rice model~~. With the free space model, in the line of sight region where no terrain obstacle blocks the direct signal from transmitter to receiver, path loss is determined on the basis of free space propagation. For a terrain obstructed region, the path loss is calculated by using the Epstein-Peterson approach for combining the diffraction losses from up to 10 obstacles in a single propagation path. An additional loss factor was included for terrain obstructions only partially obstructing the sixty percent Fresnel zone. The operation of the Longley-Rice model is well known. The parameters used in setting up the Longley-Rice propagation prediction model are shown below.

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<sup>3</sup> “Terrain departs widely” refers to a terrain roughness value ( $\Delta h$ ) of 20 meters or less or 100 meters or more.



Transmit antenna type: omnidirectional  
Transmit antenna height (AGL): 34 m  
Receive antenna type: omnidirectional  
Receive antenna height (AGL): 2.0 m  
Grid spacing: 1 km  
Terrain: U.S. 3 arc second data

OTHER REQUIRED ELEMENTS OF THE SUPPLEMENTAL SHOWING

Figures 4 and 5 of this supplemental showing are coverage maps showing the predicted KXCL field strength with respect to the proposed main studio location. Figure 4 shows the KXCL ~~field strength predicted using the free space plus diffraction model~~ and Figure 5 shows the KXCL field strength predicted using the ~~Longley-Rice model~~.

Figure 6 of this supplemental showing is a map depicting the 70 dBu contour locations using the standard, free space plus diffraction, and the Longley-Rice methods. The distance to the principal community contour as predicted using the free space plus diffraction method is 69.6 percent greater than the distance to the principal community contour as predicted using the standard contour prediction method. Similarly, the distance using the Longley-Rice method is 61.6% percent greater than the distance to the



principal community contour as predicted using the standard contour prediction method. This satisfies the "10% greater" criteria.

Figure 6 also depicts compliance with Section 73.1125(a)(2) of the FCC rules. The proposed main studio location lies within the principal community contour as predicted using the free space plus diffraction and Longley-Rice methods.

Figure 7 of this supplemental showing depicts the legal boundary of Placerville with respect to the principal community contours as predicted by using the standard contour prediction method, the free space plus diffraction method, and the Longley-Rice method.

### CONCLUSION

First Broadcasting believes that the proposed main studio location complies with the FCC's main studio location rule and seeks FCC confirmation of compliance of the proposed main studio location with Section 73.1125 of the FCC rules. The instant supplemental showing shows that all requirements for use of alternative propagation prediction methodologies have been met. Terrain roughness in the direction of the proposed main



studio exceeds 400 meters and departs widely from the 50 meter terrain roughness incorporated into the standard propagation curves. The distances to the 70 dBu contours predicted using two alternative propagation prediction models exceed the distance predicted by the standard method by between 61.6 percent and 69.6 percent, well in excess of the established "ten percent greater" threshold. Finally, regardless of the propagation prediction method used, all of Placerville will receive signal strength of 70 dBu or greater.

CERTIFICATION

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge. Executed on June 9, 2006.

A handwritten signature in black ink, appearing to read "Tiffany E. Ligon".

Tiffany E. Ligon

Figure 1

### SECTION 73.313(e) STUDY

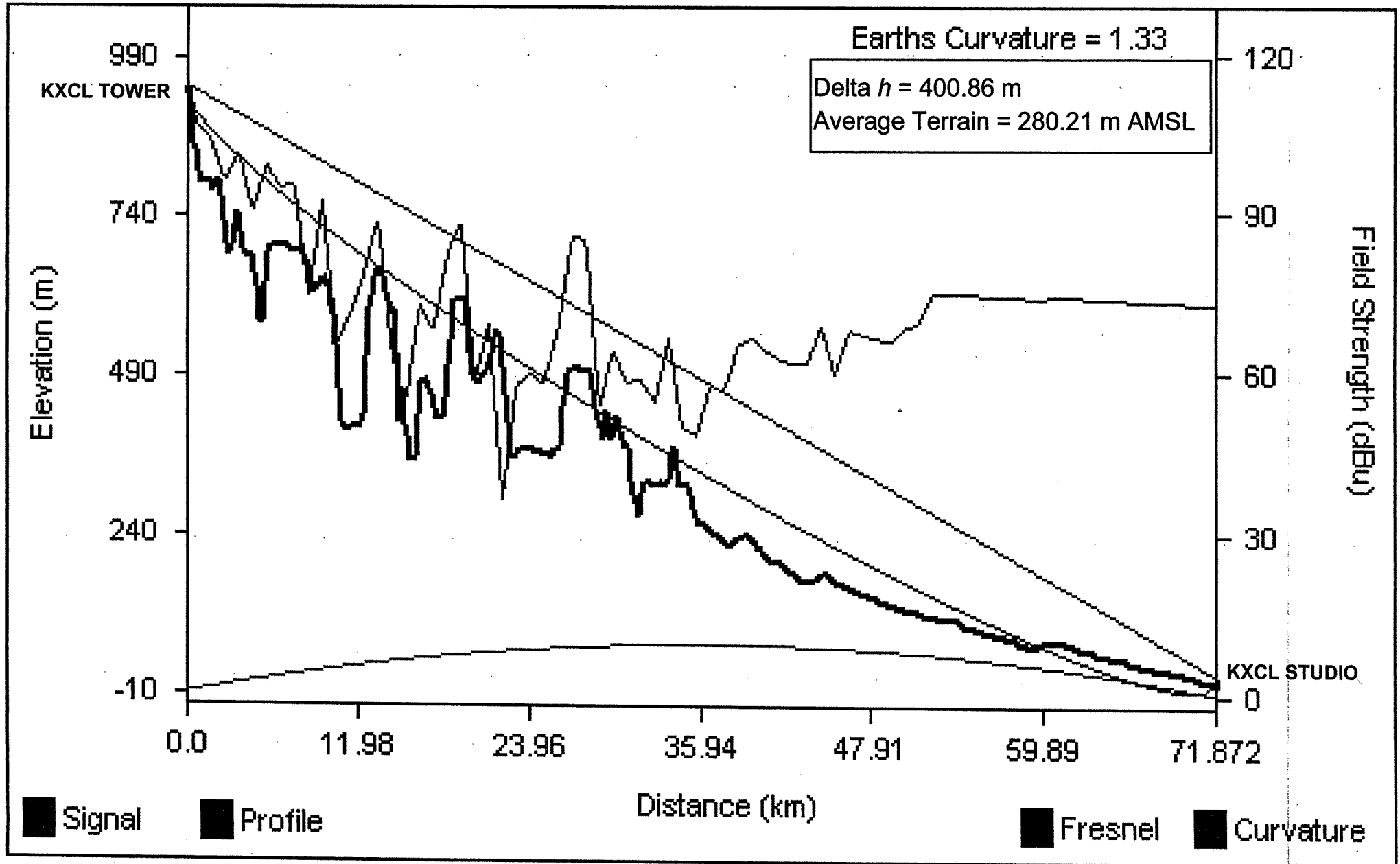


Figure 2

### SECTION 73.313(e) STUDY

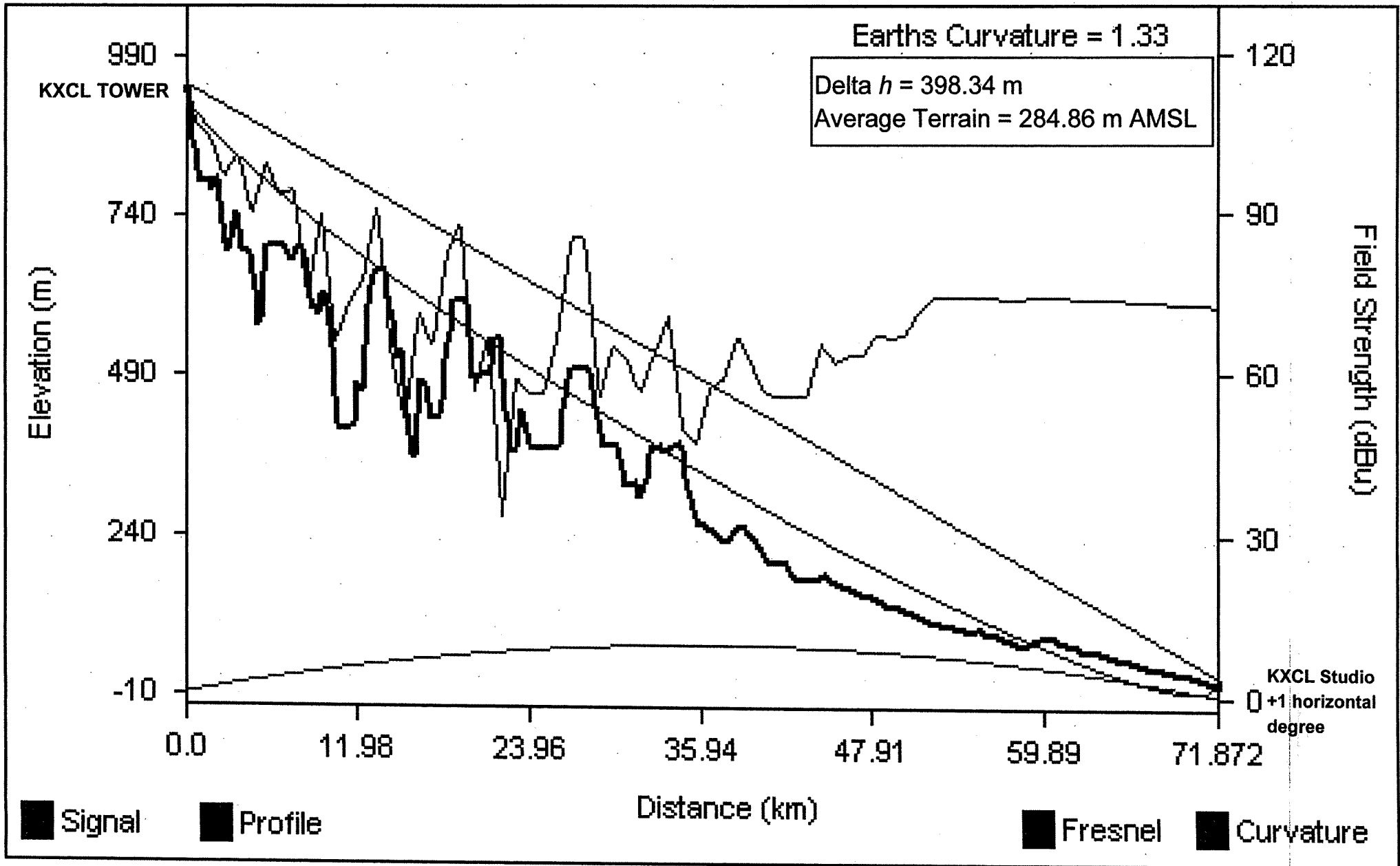
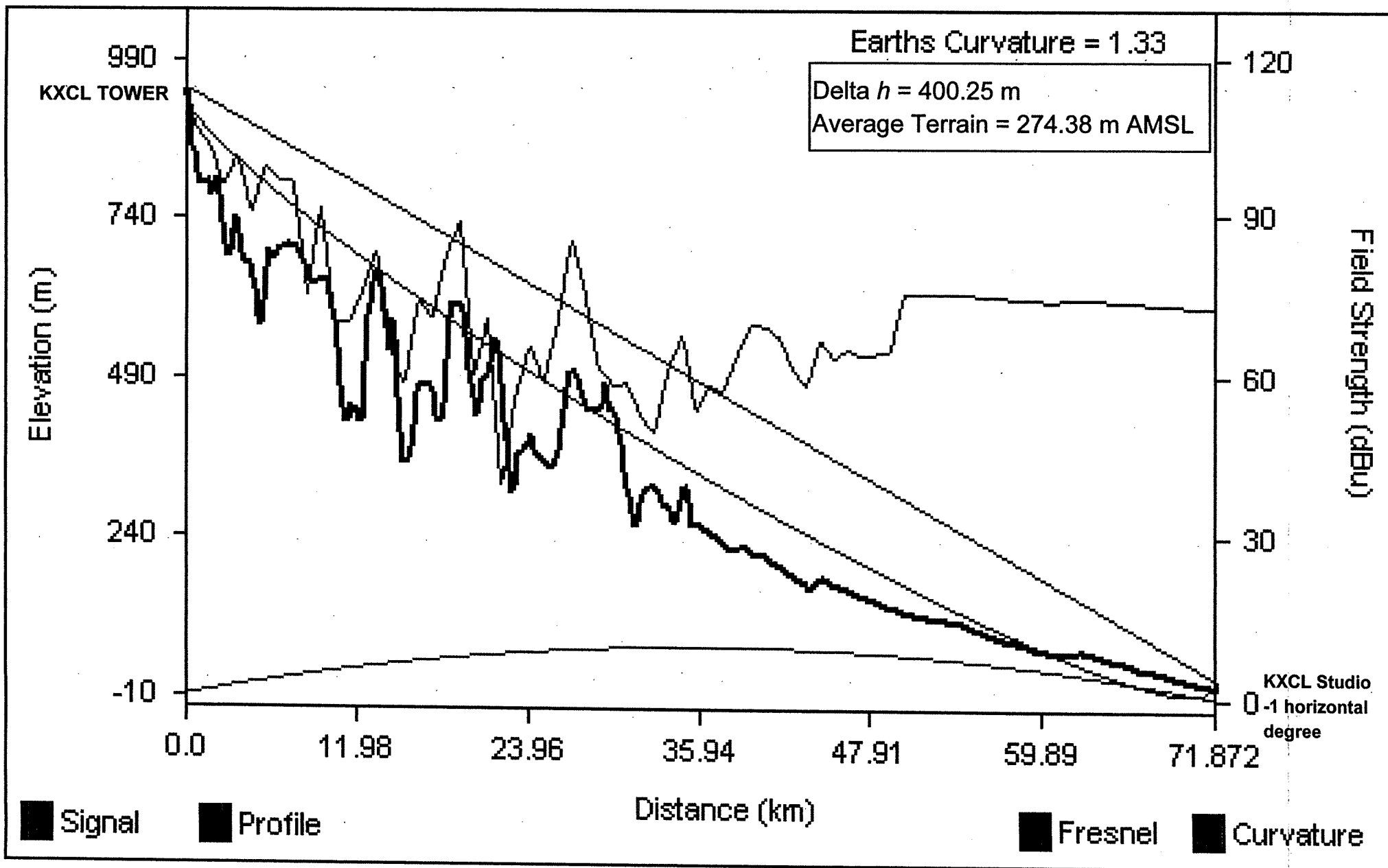
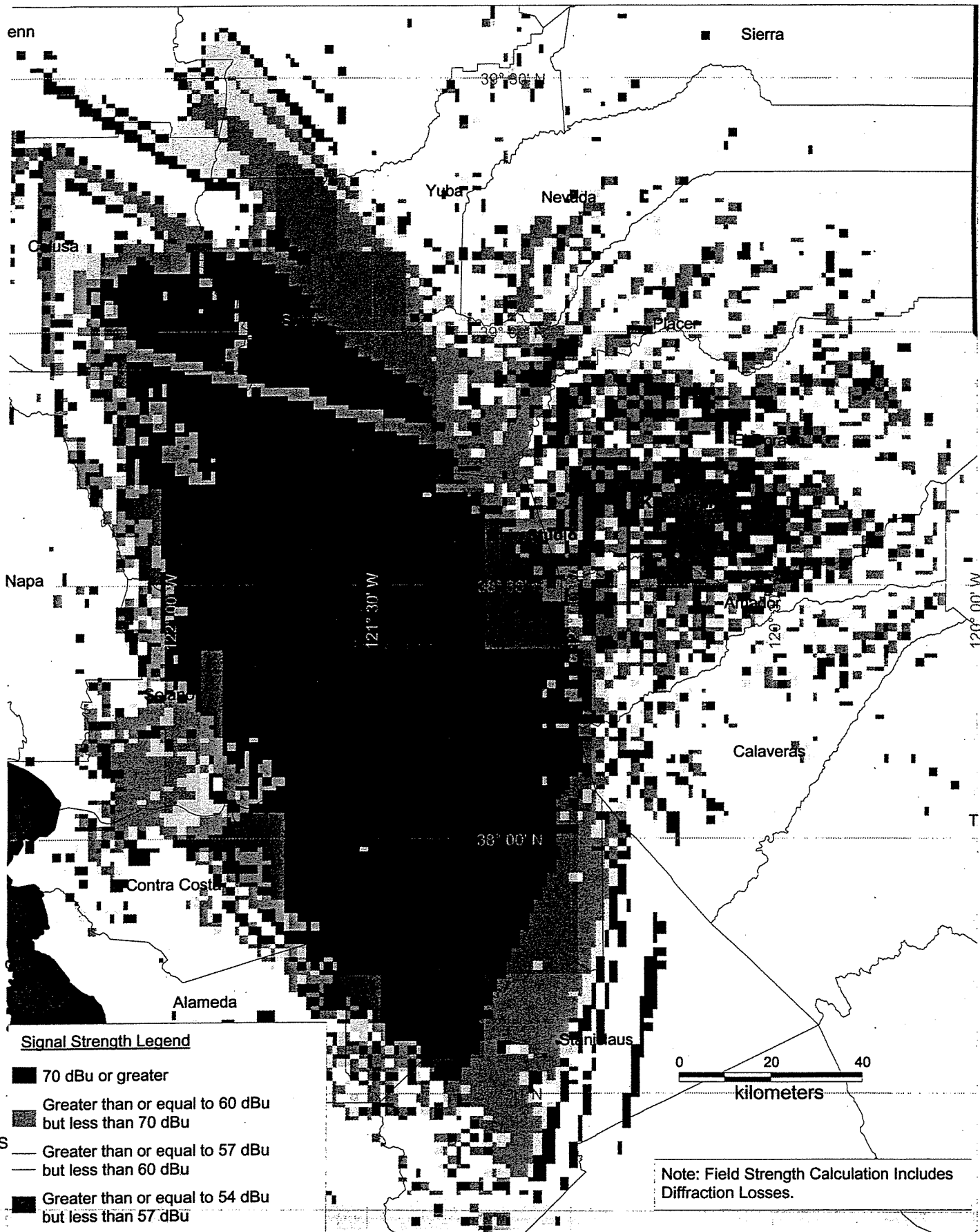


Figure 3

### SECTION 73.313(e) STUDY

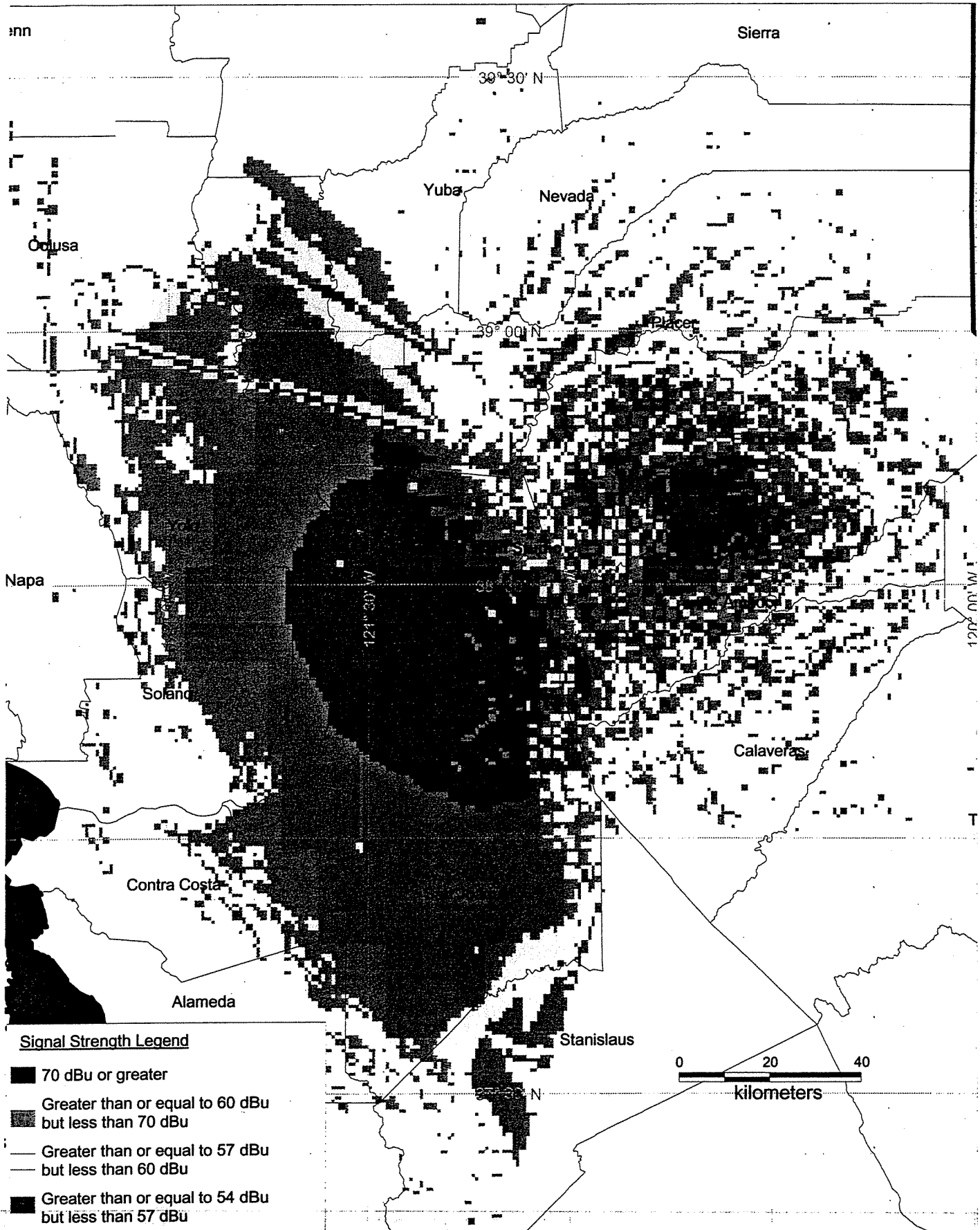


# KXCL, Placerville, CA, Free Space Propagation Model

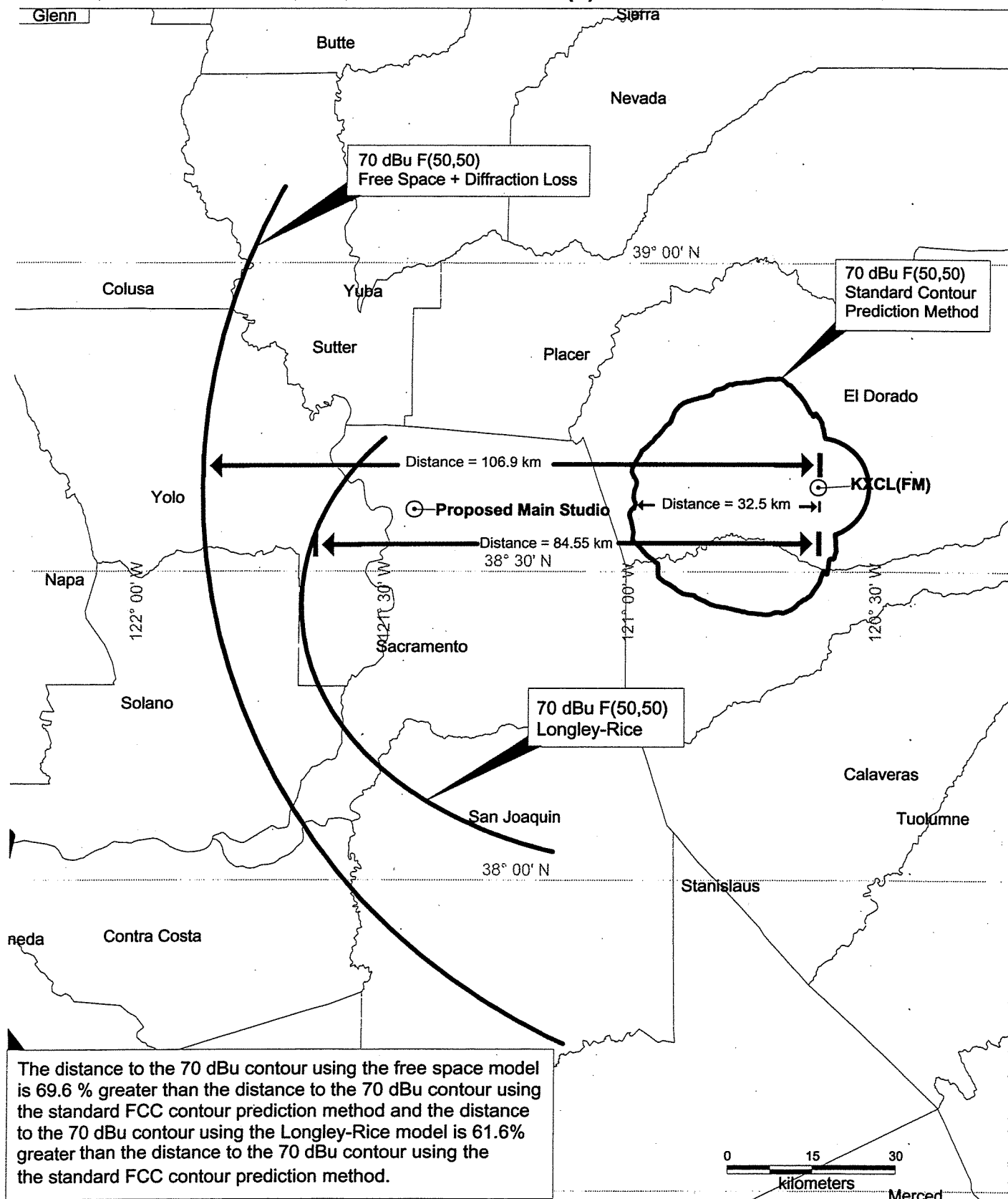




# KXCL, Placerville, CA, Longley-Rice Propagation Model



# KXCL, PLACERVILLE, CA, SECTION 73.313(e) STUDY



The distance to the 70 dBu contour using the free space model is 69.6 % greater than the distance to the 70 dBu contour using the standard FCC contour prediction method and the distance to the 70 dBu contour using the Longley-Rice model is 61.6% greater than the distance to the 70 dBu contour using the the standard FCC contour prediction method.



# KXCL, PLACERVILLE, CA, SECTION 73.313(e) STUDY

